SEQUENCE LISTING

<110> Walke, D. Wade
     Wilganowski, Nathaniel L.
     Friddle, Carl Johan

<120> Novel Human Proteases and Polynucleotides Encoding the Same

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<150> US 60/244,939
<151> 2000-11-01

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gaacacagga agtgcaacat gagagatgcg aagtgtggga agatccagtg tcagagctct    1740
gaggcccggc ccctggagtc caacgcggtg cccattgaca ccactatcat catgaatggg    1800
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<212> PRT
<213> homo sapiens

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        35                  40                  45
Gln Trp Lys Thr Ser Glu Ser Pro Val Arg Glu Lys His Pro Leu Lys
    50                  55                  60
Ala Glu Leu Arg Val Met Ala Glu Gly Arg Glu Leu Ile Leu Asp Leu
65                  70                  75                  80
Glu Lys Asn Glu Gln Leu Phe Ala Pro Ser Tyr Thr Glu Thr His Tyr
                85                  90                  95
Thr Ser Ser Gly Asn Pro Gln Thr Thr Thr Arg Lys Leu Glu Asp His
            100                 105                 110
Cys Phe Tyr His Gly Thr Val Arg Glu Thr Glu Leu Ser Ser Val Thr
            115                 120                 125
Leu Ser Thr Cys Arg Gly Ile Arg Gly Leu Ile Thr Val Ser Ser Asn
    130                 135                 140
Leu Ser Tyr Val Ile Glu Pro Leu Pro Asp Ser Lys Gly Gln His Leu
145                 150                 155                 160
Ile Tyr Arg Ser Glu His Leu Lys Pro Pro Gly Asn Cys Gly Phe
                165                 170                 175
Glu His Ser Lys Pro Thr Thr Arg Asp Trp Ala Leu Gln Phe Thr Gln
            180                 185                 190
Gln Thr Lys Lys Arg Pro Arg Arg Met Lys Arg Glu Asp Leu Asn Ser
            195                 200                 205
Met Lys Tyr Val Glu Leu Tyr Leu Val Ala Asp Tyr Leu Glu Phe Gln
    210                 215                 220
Lys Asn Arg Arg Asp Gln Asp Ala Thr Lys His Lys Leu Ile Glu Ile
225                 230                 235                 240
Ala Asn Tyr Val Asp Lys Phe Tyr Arg Ser Leu Asn Ile Arg Ile Ala
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Leu Val Gly Leu Glu Val Trp Thr His Gly Asn Met Cys Glu Val Ser
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2
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Glu Asn Pro Tyr Ser Thr Leu Trp Ser Phe Leu Ser Trp Arg Arg Lys
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Leu Leu Ala Gln Lys Tyr His Asp Asn Ala Gln Leu Ile Thr Gly Met
      290                      295                      300
Ser Phe His Gly Thr Thr Ile Gly Leu Ala Pro Leu Met Ala Met Cys
305                      310                      315                      320
Ser Val Tyr Gln Ser Gly Gly Val Asn Met Asp His Ser Glu Asn Ala
              325                      330                      335
Ile Gly Val Ala Ala Thr Met Ala His Glu Met Gly His Asn Phe Gly
          340                      345                      350
Met Thr His Asp Ser Ala Asp Cys Cys Ser Ala Ser Ala Ala Asp Gly
          355                      360                      365
Gly Cys Ile Met Ala Ala Ala Thr Gly His Pro Phe Pro Lys Val Phe
      370                      375                      380
Asn Gly Cys Asn Arg Arg Glu Leu Asp Arg Tyr Leu Gln Ser Gly Gly
385                      390         .            395                      400
Gly Met Cys Leu Ser Asn Met Pro Asp Thr Arg Met Leu Tyr Gly Gly
              405                      410                      415
Arg Arg Cys Gly Asn Gly Tyr Leu Glu Asp Gly Glu Glu Cys Asp Cys
          420                      425                      430
Gly Glu Glu Glu Glu Cys Asn Asn Pro Cys Cys Asn Ala Ser Asn Cys
          435                      440                      445
Thr Leu Arg Pro Gly Ala Glu Cys Ala His Gly Ser Cys Cys His Gln
      450                      455                      460
Cys Lys Leu Leu Ala Pro Gly Thr Leu Cys Arg Glu Gln Ala Arg Gln
465                      470                      475                      480
Cys Asp Leu Pro Glu Phe Cys Thr Gly Lys Ser Pro His Cys Pro Thr
              485                      490                      495
Asn Phe Tyr Gln Met Asp Gly Thr Pro Cys Glu Gly Gly Gln Ala Tyr
              500                      505                      510
Cys Tyr Asn Gly Met Cys Leu Thr Tyr Gln Glu Gln Cys Gln Gln Leu
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Glu His Arg Lys Cys Asn Met Arg Asp Ala Lys Cys Gly Lys Ile Gln
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Cys Gln Ser Ser Glu Ala Arg Pro Leu Glu Ser Asn Ala Val Pro Ile
          580                      585                      590
Asp Thr Thr Ile Ile Met Asn Gly Arg Gln Ile Gln Cys Arg Gly Thr
          595                      600                      605
His Val Tyr Arg Gly Pro Glu Glu Glu Gly Asp Met Leu Asp Pro Gly
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Leu Val Met Thr Gly Thr Lys Cys Gly Tyr Asn His Ile Cys Phe Glu
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Gly Gln Cys Arg Asn Thr Ser Phe Phe Glu Thr Glu Gly Cys Gly Lys
              645                      650                      655
Lys Cys Asn Gly His Gly Val Cys Asn Asn Asn Gln Asn Cys His Cys
          660                      665                      670
Leu Pro Gly Trp Ala Pro Pro Phe Cys Asn Thr Pro Gly His Gly Gly
          675                      680                      685
Ser Ile Asp Ser Gly Pro Met Pro Pro Glu Ser Val Gly Pro Val Val
      690                      695                      700
Ala Gly Val Leu Val Ala Ile Leu Val Leu Ala Val Leu Met Leu Met
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3

Tyr Tyr Cys Cys Arg Gln Asn Asn Lys Leu Gly Gln Leu Lys Pro Ser
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Ala Leu Pro Ser Lys Leu Arg Gln Gln Phe Ser Cys Pro Phe Arg Val
                740   745   750
Ser Gln Asn Ser Gly Thr Gly His Ala Asn Pro Thr Phe Lys Leu Gln
            755   760   765
Thr Pro Gln Gly Lys Arg Lys Val Phe Leu Asp Leu Cys Val Gln Val
        770   775   780
Ile Asn Thr Pro Glu Ile Leu Arg Lys Pro Ser Gln Pro Pro Pro Arg
785   790   795   800
Pro Pro Pro Asp Tyr Leu Arg Gly Gly Ser Pro Pro Ala Pro Leu Pro
                805   810   815
Ala His Leu Ser Arg Ala Ala Arg Asn Ser Pro Gly Pro Gly Ser Gln
            820   825   830
Ile Glu Arg Thr Glu Ser Ser Arg Arg Pro Pro Pro Ser Arg Pro Ile
        835   840   845
Pro Pro Ala Pro Asn Cys Ile Val Ser Gln Asp Phe Ser Arg Pro Arg
        850   855   860
Pro Pro Gln Lys Ala Leu Pro Ala Asn Pro Val Pro Gly Arg Arg Ser
865   870   875   880
Leu Pro Arg Pro Gly Gly Ala Ser Pro Leu Arg Pro Pro Gly Ala Gly
                885   890   895
Pro Gln Gln Ser Arg Pro Leu Ala Ala Leu Ala Pro Lys Arg Val Trp
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Lys Thr Cys Asn Leu Lys Thr Gly Asp Gln Phe Gln Ser Gln
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<212> DNA
<213> homo sapiens

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ctgcagcatg aacttatcat acctcagtgg aagacttcag aaagccccgt gagagaaaag   180
catccactca aagctgagct cagggtaatg gctgaggggc gagaactgat cctggacctg   240
gagaagaatg agcaactttt tgctccttcc tacacagaaa cccattatac ttcaagtggt   300
aaccctcaaa ccaccacacg gaaattggag gatcactgct tttaccacgg cacggtgagg   360
gagacagaac tgtccagcgt cacgctcagc acttgccgag gaattagagg actgattacg   420
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cccaccacca gggactgggc tcttcagttt acacaacaga ccaagaagcg acctcgcagg   600
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ggatgtgtc tctccaacat gccagacacc aggatgttgt atgaggccg gaggtgtggg   1260
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4

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gcactcccgg caaacccagt gccaggccgc aggagcctcc ccaggccagg aggtgcatcc      2640
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<213> homo sapiens

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            20   25   30
Gly Ser Glu Glu Gly Ser Pro Lys Leu Gln His Glu Leu Ile Ile Pro
        35   40   45
Gln Trp Lys Thr Ser Glu Ser Pro Val Arg Glu Lys His Pro Leu Lys
    50   55   60
Ala Glu Leu Arg Val Met Ala Glu Gly Arg Glu Leu Ile Leu Asp Leu
65   70   75   80
Glu Lys Asn Glu Gln Leu Phe Ala Pro Ser Tyr Thr Glu Thr His Tyr
                85   90   95
Thr Ser Ser Gly Asn Pro Gln Thr Thr Thr Arg Lys Leu Glu Asp His
            100   105   110
Cys Phe Tyr His Gly Thr Val Arg Glu Thr Glu Leu Ser Ser Val Thr
            115   120   125
Leu Ser Thr Cys Arg Gly Ile Arg Gly Leu Ile Thr Val Ser Ser Asn
    130   135   140
Leu Ser Tyr Val Ile Glu Pro Leu Pro Asp Ser Lys Gly Gln His Leu
145   150   155   160
Ile Tyr Arg Ser Glu His Leu Lys Pro Pro Gly Asn Cys Gly Phe
                165   170   175
Glu His Ser Lys Pro Thr Thr Arg Asp Trp Ala Leu Gln Phe Thr Gln
            180   185   190
Gln Thr Lys Lys Arg Pro Arg Arg Met Lys Arg Glu Asp Leu Asn Ser
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5
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Met Lys Tyr Val Glu Leu Tyr Leu Val Ala Asp Tyr Leu Glu Phe Gln
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Lys Asn Arg Arg Asp Gln Asp Ala Thr Lys His Lys Leu Ile Glu Ile
225                      230                      235                      240
Ala Asn Tyr Val Asp Lys Phe Tyr Arg Ser Leu Asn Ile Arg Ile Ala
                245                      250                      255
Leu Val Gly Leu Glu Val Trp Thr His Gly Asn Met Cys Glu Val Ser
                260                      265                      270
Glu Asn Pro Tyr Ser Thr Leu Trp Ser Phe Leu Ser Trp Arg Arg Lys
                275                      280                      285
Leu Leu Ala Gln Lys Tyr His Asp Asn Ala Gln Leu Ile Thr Gly Met
    290                      295                      300
Ser Phe His Gly Thr Thr Ile Gly Leu Ala Pro Leu Met Ala Met Cys
305                      310                      315                      320
Ser Val Tyr Gln Ser Gly Gly Val Asn Met Asp His Ser Glu Asn Ala
                325                      330                      335
Ile Gly Val Ala Ala Thr Met Ala His Glu Met Gly His Asn Phe Gly
                340                      345                      350
Met Thr His Asp Ser Ala Asp Cys Cys Ser Ala Ser Ala Ala Asp Gly
                355                      360                      365
Gly Cys Ile Met Ala Ala Ala Thr Gly His Pro Phe Pro Lys Val Phe
    370                      375                      380
Asn Gly Cys Asn Arg Arg Glu Leu Asp Arg Tyr Leu Gln Ser Gly Gly
385                      390                      395                      400
Gly Met Cys Leu Ser Asn Met Pro Asp Thr Arg Met Leu Tyr Gly Gly
                405                      410                      415
Arg Arg Cys Gly Asn Gly Tyr Leu Glu Asp Gly Glu Glu Cys Asp Cys
                420                      425                      430
Gly Glu Glu Glu Glu Cys Asn Asn Pro Cys Cys Asn Ala Ser Asn Cys
                435                      440                      445
Thr Leu Arg Pro Gly Ala Glu Cys Ala His Gly Ser Cys Cys His Gln
    450                      455                      460
Cys Lys Leu Leu Ala Pro Gly Thr Leu Cys Arg Glu Gln Ala Arg Gln
465                      470                      475                      480
Cys Asp Leu Pro Glu Phe Cys Thr Gly Lys Ser Pro His Cys Pro Thr
                485                      490                      495
Asn Phe Tyr Gln Met Asp Gly Thr Pro Cys Glu Gly Gly Gln Ala Tyr
                500                      505                      510
Cys Tyr Asn Gly Met Cys Leu Thr Tyr Gln Glu Gln Cys Gln Gln Leu
                515                      520                      525
Trp Gly Pro Gly Ala Arg Pro Ala Pro Asp Leu Cys Phe Glu Lys Val
    530                      535                      540
Asn Val Ala Gly Asp Thr Phe Gly Asn Cys Gly Lys Asp Met Asn Gly
545                      550                      555                      560
Glu His Arg Lys Cys Asn Met Arg Asp Ala Lys Cys Gly Lys Ile Gln
                565                      570                      575
Cys Gln Ser Ser Glu Ala Arg Pro Leu Glu Ser Asn Ala Val Pro Ile
                580                      585                      590
Asp Thr Thr Ile Ile Met Asn Gly Arg Gln Ile Gln Cys Arg Gly Thr
                595                      600                      605
His Val Tyr Arg Gly Pro Glu Glu Glu Gly Asp Met Leu Asp Pro Gly
    610                      615                      620
Leu Val Met Thr Gly Thr Lys Cys Gly Tyr Asn His Ile Cys Phe Glu
625                      630                      635                      640
Gly Gln Cys Arg Asn Thr Ser Phe Phe Glu Thr Glu Gly Cys Gly Lys
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6

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    Lys Cys Asn Gly His Gly Val Cys Asn Asn Asn Gln Asn Cys His Cys
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    Leu Pro Gly Trp Ala Pro Pro Phe Cys Asn Thr Pro Gly His Gly Gly
                  675                    680                    685
    Ser Ile Asp Ser Gly Pro Met Pro Pro Glu Ser Val Gly Pro Val Val
              690                    695                    700
    Ala Gly Val Leu Val Ala Ile Leu Val Leu Ala Val Leu Met Leu Met
    705                    710                    715                    720
    Tyr Tyr Cys Cys Arg Gln Asn Asn Lys Leu Gly Gln Leu Lys Pro Ser
                  725                    730                    735
    Ala Leu Pro Ser Lys Leu Arg Gln Gln Phe Ser Cys Pro Phe Arg Val
                  740                    745                    750
    Ser Gln Asn Ser Gly Thr Gly His Ala Asn Pro Thr Phe Lys Leu Gln
                  755                    760                    765
    Thr Pro Gln Gly Lys Arg Lys Val Ile Asn Thr Pro Glu Ile Leu Arg
              770                    775                    780
    Lys Pro Ser Gln Pro Pro Pro Arg Pro Pro Pro Asp Tyr Leu Arg Gly
    785                    790                    795                    800
    Gly Ser Pro Pro Ala Pro Leu Pro Ala His Leu Ser Arg Ala Ala Arg
                  805                    810                    815
    Asn Ser Pro Gly Pro Gly Ser Gln Ile Glu Arg Thr Glu Ser Ser Arg
                  820                    825                    830
    Arg Pro Pro Pro Ser Arg Pro Ile Pro Pro Ala Pro Asn Cys Ile Val
                  835                    840                    845
    Ser Gln Asp Phe Ser Arg Pro Arg Pro Pro Gln Lys Ala Leu Pro Ala
              850                    855                    860
    Asn Pro Val Pro Gly Arg Arg Ser Leu Pro Arg Pro Gly Gly Ala Ser
    865                    870                    875                    880
    Pro Leu Arg Pro Pro Gly Ala Gly Pro Gln Gln Ser Arg Pro Leu Ala
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gaagtgtgga ccccacggga catgtgtgaa gtttcagaga atccatattc taccctctgg       840
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7

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tctgtgtacc agtctggagg agtcaacatg gaccactccg agaatgccat tggcgtggct    1020
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tgctcggcca gtgcggctga tggtgggtgc atcatggcag ctgccactgg caccccttt     1140
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<210> 6
<211> 963
<212> PRT
<213> homo sapiens

<400> 6
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Met Pro Gly Gly Ala Gly Ala Ala Arg Leu Cys Leu Leu Ala Phe Ala
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Leu Gln Pro Leu Arg Pro Arg Ala Ala Arg Glu Pro Gly Trp Thr Arg
            20                  25                  30
Gly Ser Glu Glu Gly Ser Pro Lys Leu Gln His Glu Leu Ile Ile Pro
        35                  40                  45
Gln Trp Lys Thr Ser Glu Ser Pro Val Arg Glu Lys His Pro Leu Lys
    50                  55                  60
Ala Glu Leu Arg Val Met Ala Glu Gly Arg Glu Leu Ile Leu Asp Leu
65                  70                  75                  80
Glu Lys Asn Glu Gln Leu Phe Ala Pro Ser Tyr Thr Glu Thr His Tyr
                85                  90                  95
Thr Ser Ser Gly Asn Pro Gln Thr Thr Thr Arg Lys Leu Glu Asp His
            100                 105                 110
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8

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Cys Phe Tyr His Gly Thr Val Arg Glu Thr Glu Leu Ser Ser Val Thr
        115                 120                 125
Leu Ser Thr Cys Arg Gly Ile Arg Gly Leu Ile Thr Val Ser Ser Asn
        130                 135                 140
Leu Ser Tyr Val Ile Glu Pro Leu Pro Asp Ser Lys Gly Gln His Leu
145                 150                 155                 160
Ile Tyr Arg Ser Glu His Leu Lys Pro Pro Gly Asn Cys Gly Phe
                165                 170                 175
Glu His Ser Lys Pro Thr Thr Arg Asp Trp Ala Leu Gln Phe Thr Gln
                180                 185                 190
Gln Thr Lys Lys Arg Pro Arg Arg Met Lys Arg Glu Asp Leu Asn Ser
                195                 200                 205
Met Lys Tyr Val Glu Leu Tyr Leu Val Ala Asp Tyr Leu Glu Phe Gln
        210                 215                 220
Lys Asn Arg Arg Asp Gln Asp Ala Thr Lys His Lys Leu Ile Glu Ile
225                 230                 235                 240
Ala Asn Tyr Val Asp Lys Phe Tyr Arg Ser Leu Asn Ile Arg Ile Ala
                245                 250                 255
Leu Val Gly Leu Glu Val Trp Thr His Gly Asn Met Cys Glu Val Ser
                260                 265                 270
Glu Asn Pro Tyr Ser Thr Leu Trp Ser Phe Leu Ser Trp Arg Arg Lys
        275                 280                 285
Leu Leu Ala Gln Lys Tyr His Asp Asn Ala Gln Leu Ile Thr Gly Met
        290                 295                 300
Ser Phe His Gly Thr Thr Ile Gly Leu Ala Pro Leu Met Ala Met Cys
305                 310                 315                 320
Ser Val Tyr Gln Ser Gly Gly Val Asn Met Asp His Ser Glu Asn Ala
                325                 330                 335
Ile Gly Val Ala Ala Thr Met Ala His Glu Met Gly His Asn Phe Gly
        340                 345                 350
Met Thr His Asp Ser Ala Asp Cys Cys Ser Ala Ser Ala Ala Asp Gly
        355                 360                 365
Gly Cys Ile Met Ala Ala Ala Thr Gly His Pro Phe Pro Lys Val Phe
        370                 375                 380
Asn Gly Cys Asn Arg Arg Glu Leu Asp Arg Tyr Leu Gln Ser Gly Gly
385                 390                 395                 400
Gly Met Cys Leu Ser Asn Met Pro Asp Thr Arg Met Leu Tyr Gly Gly
                405                 410                 415
Arg Arg Cys Gly Asn Gly Tyr Leu Glu Asp Gly Glu Glu Cys Asp Cys
                420                 425                 430
Gly Glu Glu Glu Glu Cys Asn Asn Pro Cys Cys Asn Ala Ser Asn Cys
        435                 440                 445
Thr Leu Arg Pro Gly Ala Glu Cys Ala His Gly Ser Cys Cys His Gln
        450                 455                 460
Cys Lys Leu Leu Ala Pro Gly Thr Leu Cys Arg Glu Gln Ala Arg Gln
465                 470                 475                 480
Cys Asp Leu Pro Glu Phe Cys Thr Gly Lys Ser Pro His Cys Pro Thr
                485                 490                 495
Asn Phe Tyr Gln Met Asp Gly Thr Pro Cys Glu Gly Gly Gln Ala Tyr
                500                 505                 510
Cys Tyr Asn Gly Met Cys Leu Thr Tyr Gln Glu Gln Cys Gln Gln Leu
        515                 520                 525
Trp Gly Pro Gly Ala Arg Pro Ala Pro Asp Leu Cys Phe Glu Lys Val
        530                 535                 540
Asn Val Ala Gly Asp Thr Phe Gly Asn Cys Gly Lys Asp Met Asn Gly
545                 550                 555                 560
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9

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Glu His Arg Lys Cys Asn Met Arg Asp Ala Lys Cys Gly Lys Ile Gln
                565                 570                 575
Cys Gln Ser Ser Glu Ala Arg Pro Leu Glu Ser Asn Ala Val Pro Ile
            580                 585                 590
Asp Thr Thr Ile Ile Met Asn Gly Arg Gln Ile Gln Cys Arg Gly Thr
            595                 600                 605
His Val Tyr Arg Gly Pro Glu Glu Glu Gly Asp Met Leu Asp Pro Gly
    610                 615                 620
Leu Val Met Thr Gly Thr Lys Cys Gly Tyr Asn His Ile Cys Phe Glu
625                 630                 635                 640
Gly Gln Cys Arg Asn Thr Ser Phe Phe Glu Thr Glu Gly Cys Gly Lys
            645                 650                 655
Lys Cys Asn Gly His Gly Val Cys Asn Asn Asn Gln Asn Cys His Cys
            660                 665                 670
Leu Pro Gly Trp Ala Pro Pro Phe Cys Asn Thr Pro Gly His Gly Gly
            675                 680                 685
Ser Ile Asp Ser Gly Pro Met Pro Pro Glu Ser Val Gly Pro Val Val
            690                 695                 700
Ala Gly Val Leu Val Ala Ile Leu Val Leu Ala Val Leu Met Leu Met
705                 710                 715                 720
Tyr Tyr Cys Cys Arg Gln Asn Asn Lys Leu Gly Gln Leu Lys Pro Ser
            725                 730                 735
Ala Leu Pro Ser Lys Leu Arg Gln Gln Phe Ser Cys Pro Phe Arg Val
            740                 745                 750
Ser Gln Asn Ser Gly Thr Gly His Ala Asn Pro Thr Phe Lys Leu Gln
            755                 760                 765
Thr Pro Gln Gly Lys Arg Lys Val Phe Leu Asp Leu Cys Val Gln Val
    770                 775                 780
Ile Asn Thr Pro Glu Ile Leu Arg Lys Pro Ser Gln Pro Pro Pro Arg
785                 790                 795                 800
Pro Pro Pro Asp Tyr Leu Arg Gly Gly Ser Pro Pro Ala Pro Leu Pro
            805                 810                 815
Ala His Leu Ser Arg Ala Ala Arg Asn Ser Pro Gly Pro Gly Ser Gln
            820                 825                 830
Ile Glu Arg Thr Glu Ser Ser Arg Arg Pro Pro Pro Ser Arg Pro Ile
            835                 840                 845
Pro Pro Ala Pro Asn Cys Ile Val Ser Gln Asp Phe Ser Arg Pro Arg
    850                 855                 860
Pro Pro Gln Lys Ala Leu Pro Ala Asn Pro Val Pro Gly Arg Arg Ser
865                 870                 875                 880
Leu Pro Arg Pro Gly Gly Ala Ser Pro Leu Arg Pro Pro Gly Ala Gly
            885                 890                 895
Pro Gln Gln Ser Arg Pro Leu Ala Ala Leu Ala Pro Lys Val Ser Pro
            900                 905                 910
Arg Glu Ala Leu Lys Val Lys Ala Gly Thr Arg Gly Leu Gln Gly Gly
            915                 920                 925
Arg Cys Arg Val Glu Lys Thr Lys Gln Phe Met Leu Leu Val Val Trp
    930                 935                 940
Thr Glu Leu Pro Glu Gln Lys Pro Arg Ala Lys His Ser Cys Phe Leu
945                 950                 955                 960
Val Pro Ala
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<210> 7
<211> 2868
<212> DNA

10

<213> homo sapiens

<400> 7

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ctgcagcatg aacttatcat acctcagtgg aagacttcag aaagccccgt gagagaaaag     180
catccactca aagctgagct caggtaatg gctgaggggc gagaactgat cctggacctg     240
gagaagaatg agcaactttt tgctccttcc tacacagaaa cccattatac ttcaagtggt     300
aaccctcaaa ccaccacacg gaaattggag gatcactgct tttaccacgg cacggtgagg     360
gagacagaac tgtccagcgt cacgctcagc acttgccgag gaattagagg actgattacg     420
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atttacagat ctgaacatct caagccgccc ccgggaaact gtgggttcga gcactccaag     540
cccaccacca gggactgggc tcttcagttt acacaacaga ccaagaagcg acctcgcagg     600
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ttagagtttc agaagaatcg acgagaccag gacgccacca aacacaagct catagagatc     720
gccaactatg ttgataagtt ttaccgatcc ttgaacatcc ggattgctct cgtgggcttg     780
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<210> 8
<211> 955
<212> PRT
<213> homo sapiens

11

<400> 8

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            20                  25                  30
Gly Ser Glu Glu Gly Ser Pro Lys Leu Gln His Glu Leu Ile Ile Pro
        35                  40                  45
Gln Trp Lys Thr Ser Glu Ser Pro Val Arg Glu Lys His Pro Leu Lys
    50                  55                  60
Ala Glu Leu Arg Val Met Ala Glu Gly Arg Glu Leu Ile Leu Asp Leu
65                  70                  75                  80
Glu Lys Asn Glu Gln Leu Phe Ala Pro Ser Tyr Thr Glu Thr His Tyr
                85                  90                  95
Thr Ser Ser Gly Asn Pro Gln Thr Thr Thr Arg Lys Leu Glu Asp His
            100                 105                 110
Cys Phe Tyr His Gly Thr Val Arg Glu Thr Glu Leu Ser Ser Val Thr
            115                 120                 125
Leu Ser Thr Cys Arg Gly Ile Arg Gly Leu Ile Thr Val Ser Ser Asn
    130                 135                 140
Leu Ser Tyr Val Ile Glu Pro Leu Pro Asp Ser Lys Gly Gln His Leu
145                 150                 155                 160
Ile Tyr Arg Ser Glu His Leu Lys Pro Pro Pro Gly Asn Cys Gly Phe
            165                 170                 175
Glu His Ser Lys Pro Thr Thr Arg Asp Trp Ala Leu Gln Phe Thr Gln
            180                 185                 190
Gln Thr Lys Lys Arg Pro Arg Arg Met Lys Arg Glu Asp Leu Asn Ser
            195                 200                 205
Met Lys Tyr Val Glu Leu Tyr Leu Val Ala Asp Tyr Leu Glu Phe Gln
    210                 215                 220
Lys Asn Arg Arg Asp Gln Asp Ala Thr Lys His Lys Leu Ile Glu Ile
225                 230                 235                 240
Ala Asn Tyr Val Asp Lys Phe Tyr Arg Ser Leu Asn Ile Arg Ile Ala
            245                 250                 255
Leu Val Gly Leu Glu Val Trp Thr His Gly Asn Met Cys Glu Val Ser
            260                 265                 270
Glu Asn Pro Tyr Ser Thr Leu Trp Ser Phe Leu Ser Trp Arg Arg Lys
            275                 280                 285
Leu Leu Ala Gln Lys Tyr His Asp Asn Ala Gln Leu Ile Thr Gly Met
    290                 295                 300
Ser Phe His Gly Thr Thr Ile Gly Leu Ala Pro Leu Met Ala Met Cys
305                 310                 315                 320
Ser Val Tyr Gln Ser Gly Gly Val Asn Met Asp His Ser Glu Asn Ala
            325                 330                 335
Ile Gly Val Ala Ala Thr Met Ala His Glu Met Gly His Asn Phe Gly
            340                 345                 350
Met Thr His Asp Ser Ala Asp Cys Cys Ser Ala Ser Ala Ala Asp Gly
            355                 360                 365
Gly Cys Ile Met Ala Ala Ala Thr Gly His Pro Phe Pro Lys Val Phe
    370                 375                 380
Asn Gly Cys Asn Arg Arg Glu Leu Asp Arg Tyr Leu Gln Ser Gly Gly
385                 390                 395                 400
Gly Met Cys Leu Ser Asn Met Pro Asp Thr Arg Met Leu Tyr Gly Gly
            405                 410                 415
Arg Arg Cys Gly Asn Gly Tyr Leu Glu Asp Gly Glu Glu Cys Asp Cys
            420                 425                 430
Gly Glu Glu Glu Glu Cys Asn Asn Pro Cys Cys Asn Ala Ser Asn Cys
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12

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                  435                     440                     445
     Thr Leu Arg Pro Gly Ala Glu Cys Ala His Gly Ser Cys Cys His Gln
         450                     455                 460
     Cys Lys Leu Leu Ala Pro Gly Thr Leu Cys Arg Glu Gln Ala Arg Gln
     465                     470                 475                 480
     Cys Asp Leu Pro Glu Phe Cys Thr Gly Lys Ser Pro His Cys Pro Thr
                     485                     490                 495
     Asn Phe Tyr Gln Met Asp Gly Thr Pro Cys Glu Gly Gly Gln Ala Tyr
             500                     505                 510
     Cys Tyr Asn Gly Met Cys Leu Thr Tyr Gln Glu Gln Cys Gln Gln Leu
             515                     520                 525
     Trp Gly Pro Gly Ala Arg Pro Ala Pro Asp Leu Cys Phe Glu Lys Val
         530                     535                 540
     Asn Val Ala Gly Asp Thr Phe Gly Asn Cys Gly Lys Asp Met Asn Gly
     545                     550                 555                 560
     Glu His Arg Lys Cys Asn Met Arg Asp Ala Lys Cys Gly Lys Ile Gln
                     565                     570                 575
     Cys Gln Ser Ser Glu Ala Arg Pro Leu Glu Ser Asn Ala Val Pro Ile
                     580                     585                 590
     Asp Thr Thr Ile Ile Met Asn Gly Arg Gln Ile Gln Cys Arg Gly Thr
                 595                     600                 605
     His Val Tyr Arg Gly Pro Glu Glu Glu Gly Asp Met Leu Asp Pro Gly
             610                     615                 620
     Leu Val Met Thr Gly Thr Lys Cys Gly Tyr Asn His Ile Cys Phe Glu
     625                     630                 635                 640
     Gly Gln Cys Arg Asn Thr Ser Phe Phe Glu Thr Glu Gly Cys Gly Lys
                     645                     650                 655
     Lys Cys Asn Gly His Gly Val Cys Asn Asn Asn Gln Asn Cys His Cys
                     660                     665                 670
     Leu Pro Gly Trp Ala Pro Pro Phe Cys Asn Thr Pro Gly His Gly Gly
             675                     680                 685
     Ser Ile Asp Ser Gly Pro Met Pro Pro Glu Ser Val Gly Pro Val Val
             690                     695                 700
     Ala Gly Val Leu Val Ala Ile Leu Val Leu Ala Val Leu Met Leu Met
     705                     710                 715                 720
     Tyr Tyr Cys Cys Arg Gln Asn Asn Lys Leu Gly Gln Leu Lys Pro Ser
                 725                     730                 735
     Ala Leu Pro Ser Lys Leu Arg Gln Gln Phe Ser Cys Pro Phe Arg Val
                 740                     745                 750
     Ser Gln Asn Ser Gly Thr Gly His Ala Asn Pro Thr Phe Lys Leu Gln
             755                     760                 765
     Thr Pro Gln Gly Lys Arg Lys Val Ile Asn Thr Pro Glu Ile Leu Arg
         770                     775                 780
     Lys Pro Ser Gln Pro Pro Pro Arg Pro Pro Pro Asp Tyr Leu Arg Gly
     785                     790                 795                 800
     Gly Ser Pro Pro Ala Pro Leu Pro Ala His Leu Ser Arg Ala Ala Arg
                     805                     810                 815
     Asn Ser Pro Gly Pro Gly Ser Gln Ile Glu Arg Thr Glu Ser Ser Arg
                     820                     825                 830
     Arg Pro Pro Pro Ser Arg Pro Ile Pro Pro Ala Pro Asn Cys Ile Val
                 835                     840                 845
     Ser Gln Asp Phe Ser Arg Pro Arg Pro Pro Gln Lys Ala Leu Pro Ala
             850                     855                 860
     Asn Pro Val Pro Gly Arg Arg Ser Leu Pro Arg Pro Gly Gly Ala Ser
     865                     870                 875                 880
     Pro Leu Arg Pro Pro Gly Ala Gly Pro Gln Gln Ser Arg Pro Leu Ala
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13

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                   885                    890                    895
Ala Leu Ala Pro Lys Val Ser Pro Arg Glu Ala Leu Lys Val Lys Ala
                   900                    905            910
Gly Thr Arg Gly Leu Gln Gly Gly Arg Cys Arg Val Glu Lys Thr Lys
               915                    920            925
Gln Phe Met Leu Leu Val Val Trp Thr Glu Leu Pro Glu Gln Lys Pro
       930                    935                    940
Arg Ala Lys His Ser Cys Phe Leu Val Pro Ala
945                    950                    955


<210> 9
<211> 3512
<212> DNA
<213> homo sapiens

<400> 9
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cgcggggcga gccggggggt tccagacgcg cctccaccgc cgggcagtgg gcaggtatgg   180
ctgagggcgt gtgagcgccg agcgctaagg gccgccgcca ccatgccagg gggcgcaggc   240
gccgcccggc tctgcttgct ggcgtttgcc ctgcagcccc tccggccgcg ggcggcgcgg   300
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atacctcagt ggaagacttc agaaagcccc gtgagagaaa agcatccact caaagctgag   420
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14

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